AMENDMENTS TO THE CLAIMS

This listing of claims will replace all previous versions, and listings, of claims in the Application.

Listing of Claims

Please amend the Claims as follows:

1. (Currently Amended) Process for assembly of aluminum alloy plates comprising fluxless brazing under a controlled atmosphere consisting essentially of nitrogen and/or argon at a temperature of between 580°C and 620°C, and rapid cooling, and in which at least one of the plates consists essentially of:

(a) a core alloy with composition (% by weight):

Si 0.3-1.0; Fe<1.0; Cu 0.3-1.0; Mn 0.3-2.0; Mg 0.3-3.0; Zn<6.0; Ti<0.1; Zr<0.3; Cr<0.3; Ni<2.0; Co<2.0; Bi<0.5; Y<0.5; other elements <0.05 each and <0.15 total, remainder aluminum, and

(b) an aluminum brazing alloy coated as a single layer on at least one face of the core alloy, the aluminum brazing alloy including 4% to 15% of silicon and 0.01% to 0.5% of at least one element selected from the group consisting of Ag, Be, Bi, Ce, La, Pb, Pd, Sb, Y or mischmetal, the aluminum brazing alloy having no intentional addition of sodium.

2. (Previously Presented) Process according to claim 1, wherein the copper content of the core alloy is between 0.35% and 1%.

3. (Previously Presented) Process according to claim 1, wherein the manganese content of the core alloy is between 0.3% and 0.7%.

4. (Previously Presented) Process according to claim 1, wherein the magnesium content of the core alloy is between 0.35% and 0.7%.

5. (Previously Presented) Process according to claim 1, wherein the zinc content of the core alloy is less than 0.2%.

6. (Previously Presented) Process according to claim 1, wherein the bismuth content of the core alloy is between 0.05% and 0.5%.

7. (Previously Presented) Process according to claim 1, wherein the yttrium content of the core alloy is between 0.01% and 0.5%.

8. (Previously Presented) Process according to claim 1, wherein the composition of the core alloy is (% by weight):

Si 0.3-1.0; Fe<0.5; Cu 0.35-1.0; Mn 0.3-0.7; Mg 0.35-0.7; Zn<0.2; Ti<0.1; Zr<0.3; Cr<0.3; Ni<1.0; Co<1.0; Bi<0.5; Y<0.5; other elements <0.05 each and <0.15 total, remainder aluminum.

9. (Previously Presented) Process according to claim 1, wherein the brazing alloy is cladded onto the core alloy by co-rolling.

10. (Previously Presented) Process according to claim 1, wherein the brazing alloy coating is composed of particles.

11. (Previously Presented) Process according to claim 1, wherein the process is used for manufacturing of heat exchangers and that aging is conducted in hot parts during operation of exchangers.

12. (Previously Presented) Process according to claim 1, comprising aging at a temperature of between 80°C and 250°C after rapid cooling.

13. (Previously Presented) Process according to claim 10, wherein the particles are coated by a polymer resin.

14. (Currently Amended) A process for brazing aluminum alloy plates comprising:

(a) coating one or more plates on at least one face with a single layer consisting of a cladding alloy comprising between 4% to 15% by weight silicon and 0.01% to 0.5% by weight

of at least one element selected from the group consisting of Ag, Be, Bi, Ce, La, Pb, Pd, Sb, Y or mischmetal, the cladding alloy being free of sodium;

(b) subjecting the one or more plates to fluxless brazing under a controlled atmosphere consisting essentially of nitrogen and/or argon at a temperature of between 580°C and 620°C, wherein at least one of the plates subjected to fluxless brazing consists essentially of a core alloy comprising between 0.3% and 1.0% by weight silicon, between 0.3% and 3.0% by weight magnesium, between 0.3% and 2.0% by weight manganese, and between 0.3% and 1.0% by weight copper, with the cladding alloy coated as the single layer on at least one face of the core alloy, and

(c) rapidly cooling the plates.

15. (Previously Presented) The process according to claim 14 also comprising aging at a temperature of between 80°C and 250°C after rapid cooling.

16. (Previously Presented) The process according to claim 14, wherein the core alloy also comprises between 0.05% and 0.5% by weight bismuth and/or 0.01% to 0.5% by weight yttrium.

17. (Previously Presented) The process according to claim 14, wherein the core alloy comprises between 0.35% and 0.7% by weight magnesium.

18. (Previously Presented) The process according to claim 14, wherein the core alloy comprises (% by weight):

Si 0.3-1.0; Fe<0.5; Cu 0.35-1.0; Mn 0.3-0.7; Mg 0.35-0.7; Zn<0.2; Ti<0.1; Zr<0.3; Cr<0.3; Ni<1.0; Co<1.0; Bi<0.5; Y<0.5; other elements <0.05 each and <0.15 total, remainder aluminum.

19. (Cancelled)

20. (Currently Amended) A brazing sheet suitable for fluxless brazing under a controlled atmosphere consisting essentially of nitrogen and/or argon at a temperature of between 580°C and 620°C, the brazing sheet consisting essentially of:

a core alloy comprising (% by weight):

Si 0.3-1.0; Fe<1.0; Cu 0.3-1.0; Mn 0.3-2.0; Mg 0.3-3.0; Zn<6.0; Ti<0.1; Zr<0.3; Cr<0.3; Ni<2.0; Co<2.0; Bi<0.5; Y<0.5; other elements <0.05 each and <0.15 total, remainder aluminum; and

an aluminum brazing alloy coating at least one face of the core alloy, wherein the brazing alloy occupies an entire thickness between the core alloy and a respective outer surface of the brazing sheet, the brazing alloy comprising (% by weight):

4% to 15% of silicon and 0.01% to 0.5% of at least one element selected from the group consisting of Ag, Be, Bi, Ce, La, Pb, Pd, Sb, Y or mischmetal, the aluminum brazing alloy having no intentional addition of sodium.

21. (Previously Presented) Process according to claim 1, wherein when only one face of the core alloy is coated with the brazing alloy, an opposed face of the core alloy is uncoated.

22. (Previously Presented) Process according to claim 1, wherein when only one face of the core alloy is coated with the brazing alloy, an opposed face of the core alloy is coated with a sacrificial Al-Zn alloy.